

CLAIMS

1. A network tap module having a network line monitoring function, the module comprising:

5 a signal splitter constructed and arranged to split a signal, which is received from a network to which in use the tap module is connected, into a first copy which is returned to the network and a second copy;

10 and arranged to receive the second copy of the signal from the signal splitter and to carry out line monitoring and statistics collecting thereon; and,

15 at least one of: (i) a display for displaying an indication of the state of the network line based on the line monitoring and statistics collection carried out by the line monitoring and statistics circuit, and (ii) an interface for allowing data relating to the state of the network line based on the line monitoring and statistics collection carried out by the line monitoring and statistics circuit to be output from the module.

2. A network tap module according to claim 1, comprising both a display for displaying an indication of the state of the network line based on the line monitoring and

25 statistics collection carried out by the line monitoring and statistics circuit, and an interface for allowing data relating to the state of the network line based on the line monitoring and statistics collection carried out by the line monitoring and statistics circuit to be output from the module.

3. A network tap module according to claim 1 or claim 2, comprising a retimer circuit constructed and arranged to

receive and regenerate the first copy of said signal prior to that copy being passed back into a said network.

4. A network tap module according to any of claims 1 to  
5 3, comprising an output line on which a third copy of said signal is in use output.

5. A network tap module having a network line monitoring function, the module comprising:

10 an optical signal splitter constructed and arranged to split an optical signal, which is received from an optical network to which in use the tap module is connected, such that a first copy of the signal continues along the optical network without retiming and to provide a second copy of  
15 the optical signal;

a line monitoring and statistics circuit constructed and arranged to receive the second copy of the signal from the signal splitter and to carry out line monitoring and statistics collecting thereon; and,

20 at least one of: (i) a display for displaying an indication of the state of the network line based on the line monitoring and statistics collection carried out by the line monitoring and statistics circuit, and (ii) an interface for allowing data relating to the state of the  
25 network line based on the line monitoring and statistics collection carried out by the line monitoring and statistics circuit to be output from the module.

6. A network tap module according to claim 5, comprising  
30 both a display for displaying an indication of the state of the network line based on the line monitoring and statistics collection carried out by the line monitoring and statistics circuit, and an interface for allowing data

relating to the state of the network line based on the line monitoring and statistics collection carried out by the line monitoring and statistics circuit to be output from the module.

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7. A network tap module according to claim 5 or claim 6, comprising an optical receiver constructed and arranged to receive the second copy of the signal from the signal splitter and to convert the received copy from optical to  
10 electrical format prior to passing it to the line monitoring and statistics circuit.

15 8. A network tap module according to any of claims 5 to 7, comprising an output line on which a third copy of said signal is in use output.

9. A network tap module, the network tap module comprising:

20 a first connector for connecting the module to a first network serial line so that a signal can be received at the first connector from a said first network serial line;

25 a second connector for connecting the module to a second network serial line so that a signal can be received at the second connector from a said second network serial line;

a first signal splitter constructed and arranged to receive a signal from a said first network serial line via the first connector and to produce at least two substantially identical copies of said signal;

30 a second signal splitter constructed and arranged to receive a signal from a said second network serial line via the second connector and to produce at least two substantially identical copies of said signal;

a first retimer circuit constructed and arranged to receive a first of said copies of said signal from the first signal splitter and to regenerate said signal for passing back into a said first network serial line;

5 a second retimer circuit constructed and arranged to receive a first of said copies of said signal from the second signal splitter and to regenerate said signal for passing back into a said second network serial line;

10 a line monitoring and statistics circuit constructed and arranged to receive a second of said copies of said signal from the first signal splitter and to carry out line monitoring and statistics collecting thereon, and to receive a second of said copies of said signal from the second signal splitter and to carry out line monitoring and 15 statistics collecting thereon; and,

at least one of: (i) a display for displaying an indication of the state of said network serial lines based on the line monitoring and statistics collection carried out by the line monitoring and statistics circuit, and (ii) 20 an interface for allowing data relating to the state of said network serial lines based on the line monitoring and statistics collection carried out by the line monitoring and statistics circuit to be output from the module.

25 10. A network tap module according to claim 9, comprising both a display for displaying an indication of the state of said network serial lines based on the line monitoring and statistics collection carried out by the line monitoring and statistics circuit, and an interface for allowing data 30 relating to the state of said network serial lines based on the line monitoring and statistics collection carried out by the line monitoring and statistics circuit to be output from the module.

11. A network tap module according to claim 9 or claim 10,  
wherein the first retimer circuit is constructed and  
arranged to pass said regenerated signal back into a said  
5 first network serial line via the second connector.

12. A network tap module according to claim 11, wherein  
the first connector is constructed and arranged to convert  
a said signal from a said first network serial line from a  
10 first format to a second format, and the second connector  
is constructed and arranged to convert said regenerated  
signal into said first format prior to said regenerated  
signal being passed back into a said first network serial  
line.

15 13. A network tap module according to any of claims 9 to  
12, wherein the second retimer circuit is constructed and  
arranged to pass said regenerated signal back into a said  
second network serial line via the first connector.

20 14. A network tap module according to claim 13, wherein  
the second connector is constructed and arranged to convert  
a said signal from a said second network serial line from a  
first format to a second format, and the first connector is  
25 constructed and arranged to convert said regenerated signal  
into said first format prior to said regenerated signal  
being passed back into a said second network serial line.

30 15. A network tap module according to any of claims 9 to  
14, comprising respective output lines on which copies of  
said signals produced by the first and second signal  
splitters can be respectively output.

16. A network tap module according to any of claims 9 to 15, wherein the or each connector is a pluggable transceiver module.